FLINN SCIENCE2GO

Science2Go is a digital learning solution that offers a new approach to laboratory education for middle and high school students. It allows students to engage in science and engineering practices in any learning environment without access to supplies or equipment. It can be used in-school as prelab work or in classrooms where complete hands-on labs are not possible.

Because the lab solutions are online, they are ideal for remote learning. Science2Go combines videos focused on lab techniques and data collection with prompts and analysis questions intentionally designed to engage students in science and engineering practices. Students observe and refine experiments, identify design flaws, analyze data, and practice scientific reasoning while connecting science to natural phenomena.

Science2Go: MS Physical Science Lab Series includes 12 labs:

- Chemical Reactions
- Heat Transfer
- Newton's Laws
- Linear Momentum
- Kinetics
- Waves and Sound
- Energy
- Gravity and Free Fall
- Friction
- Rockets
- The Structure-Property Relationship
- Gases

The labs are aligned to the NGSS and other state science standards and can be used with any textbook curriculum. Labs can be accessed on any internet-capable device and can be completed in 30-45 minutes.

FLINN SCIENTIFIC

Heat Transfer

Performance Expectations

MS-PS3-3: Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

Science and Engineering Practices

Asking questions and defining problems
Planning and carrying out investigations
Analyzing and Interpreting Data
Constructing Explanations

Crosscutting Concepts

Energy and Matter

Newton's Laws

Performance Expectations

MS-PS2-2: Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

Science and Engineering Practices

Planning and carrying out investigations
Analyzing and interpreting data
Using mathematics and computational thinking
Constructing explanations

Crosscutting Concepts

Cause and Effects
Systems and system models
Stability and change

Chemical Reactions

Performance Expectations

MS-PS1-2: Analyze and interpret data on the properties of substances before and after substances interact to determine if a chemical reaction has occurred.

Science and Engineering Practices

Analyzing and Interpreting Data
Constructing Explanations

Crosscutting Concepts

Patterns
Energy and Matter

Linear Momentum

Performance Expectations

MS-PS2-1: Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.

Science and Engineering Practices

Asking questions and defining problems
Analyzing and interpreting data
Using mathematics and computational thinking

Crosscutting Concepts

Cause and effect
Systems and system models

Kinetics

MS-PS1-2: Analyze and interpret data on the properties of substances before and after substances interact to determine if a chemical reaction has occurred.

Science and Engineering Practices

Analyzing and Interpreting Data
Constructing Explanations

Crosscutting Concepts

Patterns
Cause and effect
Energy and Matter

Waves

Performance Expectations

MS-PS4-2: Develop and use a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Science and Engineering Practices

Developing and Using Models
Obtaining, Evaluating and Communicating Information

Crosscutting concepts

Patterns
Structure and Function

Energy

Performance Expectations

MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Science and Engineering Practices

Analyzing and interpreting data
Engaging in Argument from Evidence
Constructing Explanations
Developing and Using Models

Crosscutting Concepts

Systems and system models
Energy and matter

Gravity and Free Fall

Performance Expectations

MS-PS2-4: Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.

Science and Engineering Practices

Analyzing and interpreting data
Engaging in Argument from Evidence
Constructing Explanations
Developing and Using Models

Crosscutting Concepts

Systems and System Models
Energy and Matter

The Structure-Property Relationship

Performance Expectations

MS-PS1-1 Develop models to describe the atomic composition of simple molecules and extended structures.

Science and Engineering Practices

Analyzing and interpreting data
Engaging in Argument from Evidence
Constructing Explanations
Developing and Using Models

Crosscutting Concepts

Structure and Function
Systems and system models

Gases

Performance Expectations

MS-PS3-5 Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

Science and Engineering Practices

Analyzing and interpreting data
Engaging in Argument from Evidence
Constructing Explanations
Developing and Using Models

Crosscutting Concepts

Systems and system models
Energy and matter

Friction

Performance Expectations

MS-PS2-2: Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

Science and Engineering Practices

Planning and carrying out investigations
Analyzing and interpreting data
Using mathematics and computational thinking
Constructing explanations

Crosscutting Concepts

Cause and Effects
Systems and system models
Stability and change
Structure and Function

Rockets

Performance Expectations

MS-PS1-2: Analyze and interpret data on the properties of substances before and after substances interact to determine if a chemical reaction has occurred.

Science and Engineering Practices

Analyzing and Interpreting Data
Constructing Explanations

Crosscutting Concepts

Patterns
Energy and Matter
